

ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES:
- A.THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B.IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY , CONTACT THE ENVIRONMENTAL STUDIES SECTION AT (302)760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- C.USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
- D.PROJECT AREA DELINEATED BY DELDOT IN JUNE 2017 IN ACCORDANCE WITH THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENT
- E.SHEETS PREPARED BY DELDOT, OCTOBER 2018. SHEETS LAST UPDATED: 3/10/2020

2. NATURAL RESOURCE ISSUES:
- A. PERMIT REQUIREMENTS/APPROVALS*:
- U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT NWP 23 WITH PRECONSTRUCTION NOTIFICATION (PCN)
- DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): WETLANDS & SUBAQUEOUS LANDS PERMIT
- DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED NWP 23

* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.

** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

- B. CONSTRUCTION RESTRICTIONS:
- FISHERIES - NO IN-WATER WORK FROM MARCH 1 TO JUNE 30
- ENDANGERED SPECIES - NONE
- MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:
- A.

4. STREAM RESTORATION AND RIPRAP TREATMENT:

- A. FOLLOW THE SPECIAL PROVISION FOR ITEM 707500 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM 707500 - CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE B SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM 209002 - BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM 707500 - CHANNEL BED FILL.
- B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 707500 - CHANNEL BED FILL.
- C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
- D. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 4-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 - STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM 908020 - EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
- E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM 909005 - STREAM DIVERSION.

5. PROTECTION OF RESOURCES:

- A. KEEP CLEARING IN WETLAND AREAS TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. IN WETLAND AREAS THAT ARE CLEARED, NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION IS PERMITTED. CUT VEGETATION FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH ITEM 908017 - TEMPORARY GRASS SEEDING (ANNUAL RYEGRASS).
- B. USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER/WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.
- C. USE SANDBAGS OR COMPOST FILTER LOGS (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. SANDBAGS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM 905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (CAROL SULLIVAN, 302- 760-2129) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.
- D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

| PERMANENT WETLAND IMPACT AREA SCHEDULE | | | | | |
|--|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-01 | FILL | 1139.66 | 0.0262 | N/A | USACE |
| 2-02 | FILL / 36" RCP | 2808.44 | 0.0645 | N/A | USACE |
| 2-03 | FILL | 815.07 | 0.0187 | N/A | USACE |
| 4-01 | FILL / RIP RAP | 1491.44 | 0.0342 | N/A | USACE |
| 4-02 | RIP RAP | 193.47 | 0.0044 | N/A | USACE |
| 4-03 | RIP RAP | 67.62 | 0.0016 | N/A | USACE |
| 4-04 | FILL / RIP RAP | 950.84 | 0.0218 | N/A | USACE |
| 5-01 | FILL | 1154.15 | 0.0265 | N/A | USACE |
| 5-02 | FILL | 332.46 | 0.0076 | N/A | USACE |
| 5-03 | FILL | 912.03 | 0.0209 | N/A | USACE |
| 5-04 | FILL | 129.02 | 0.0030 | N/A | USACE |
| 9-01 | FILL | 797.71 | 0.0183 | N/A | USACE |
| 9-02 | FILL | 19.08 | 0.0004 | N/A | USACE |
| 9-03 | FILL | 387.05 | 0.0089 | N/A | DNREC |
| 9-04 | FILL | 1456.21 | 0.0334 | N/A | DNREC |
| TOTAL PERM. WETLAD IMPACT AREA | | 10810.99 | 0.2482 | N/A | USACE |
| TOTAL PERM. WETLAD IMPACT AREA | | 1843.26 | 0.0423 | N/A | DNREC |

| PERMANENT OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|---------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-01 | FILL / 36" RCP PIPE | 422.11 | 0.0097 | 4.12 | USACE |
| 4-01 | RIP RAP | 346.86 | 0.0079 | 3.33 | USACE |
| 9-01 | FILL / RIP RAP | 34.22 | 0.0011 | 0.92 | USACE |
| 9-02 | FILL / RIP RAP | 30.43 | 0.0004 | 0.31 | DNREC |
| TOTAL PERM. OPEN WATER IMPACT AREA | | 803.19 | 0.0188 | 8.37 | USACE |
| TOTAL PERM. OPEN WATER IMPACT AREA | | 30.43 | 0.0004 | 0.31 | DNREC |

| TEMPORARY OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 4-01 | 29" X 45" RCP PIPE | 191.00 | 0.0043 | 16.50 | USACE |

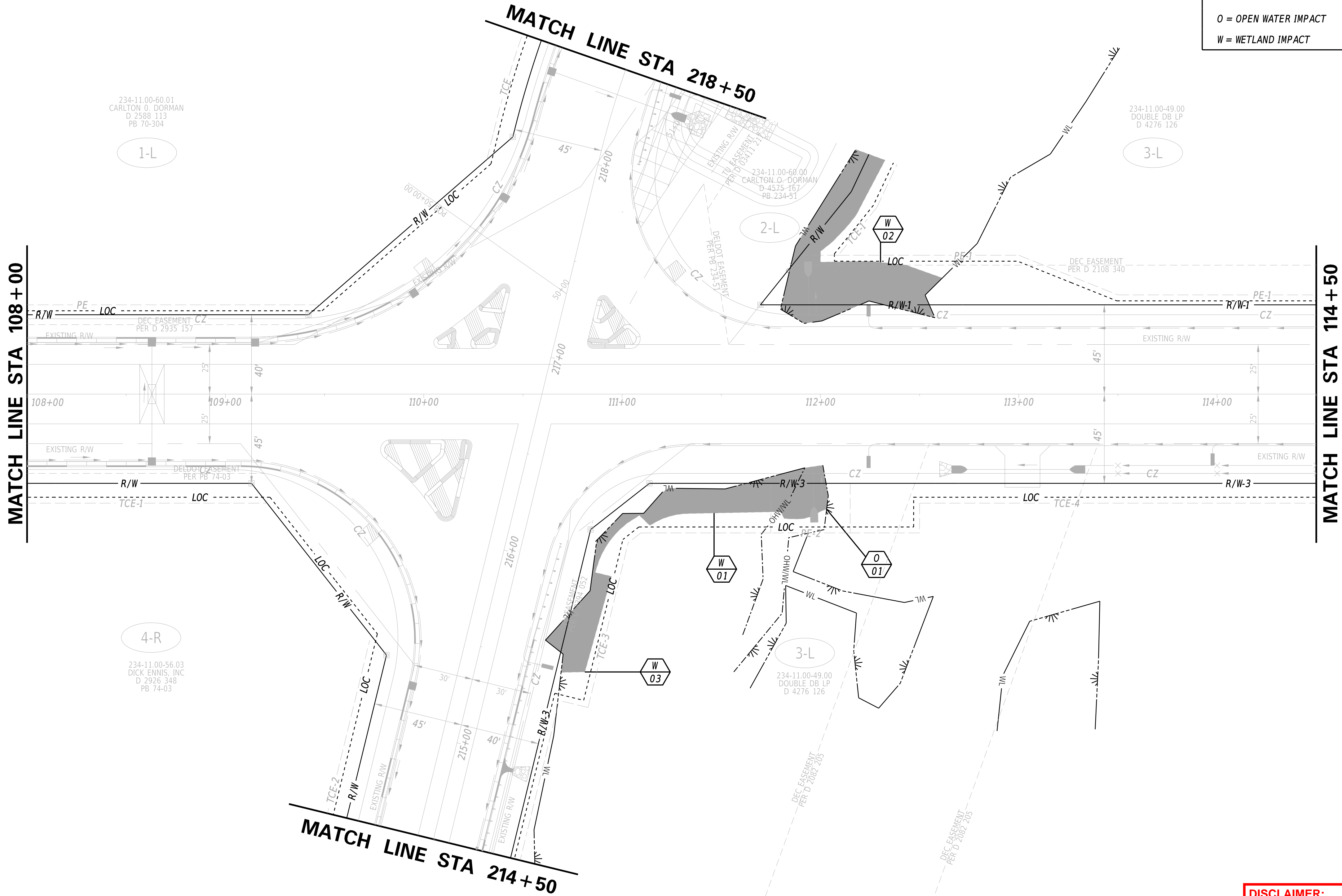
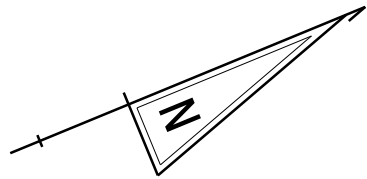
DISCLAIMER:
THIS EXAMPLE PLAN SET IS INTENDED TO BE A GUIDELINE FOR PREPARING A SET OF PLANS AND BASIC GUIDANCE FOR THE GENERAL APPEARANCE OF A SET OF PLANS. IT IS NOT INTENDED TO BE A SET OF CADD STANDARDS OR TO PROVIDE DESIGN GUIDANCE. PLEASE REFER TO THE DESIGN RESOURCE CENTER (DRC) FOR THE LATEST CADD UPDATES AND VARIOUS OTHER DOCUMENTS FOR DESIGN GUIDANCE.

| ADDENDA / REVISIONS | | NOT TO SCALE | HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND SR24 AT ANGOLA ROAD | CONTRACT | BRIDGE NO. | N/A | ENVIRONMENTAL COMPLIANCE PLAN |
|---------------------|--|--------------|---|------------|------------------------|-----|----------------------------------|
| | | | | T201200902 | DESIGNED BY: W. NAUMAN | | |
| | | | | COUNTY | CHECKED BY: C. ESHAM | | |
| | | | | SUSSEX | | | |
| | | | | | | | |

| PERMANENT WETLAND IMPACT AREA SCHEDULE | | | | | |
|--|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-01 | FILL | 1139.66 | 0.0262 | N/A | USACE |
| 2-02 | FILL/ 36" RCP PIPE | 2808.44 | 0.0645 | N/A | USACE |
| 2-03 | FILL | 815.07 | 0.0187 | N/A | USACE |
| TOTAL PERM. WETLAND IMPACT AREA | | 4763.17 | 0.1094 | N/A | USACE |

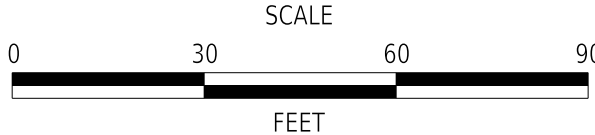
| PERMANENT OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-01 | FILL/ 36" RCP PIPE | 422.11 | 0.0097 | 4.12 | USACE |

| LEGEND | |
|-----------------------|--|
| <div></div> | PERMANENT IMPACT AREA |
| <div></div> | TEMPORARY IMPACT AREA |
| <div></div> | OHW/WL - ORDINARY HIGH WATER / WETLAND |
| <div></div> | WL - WETLAND BOUNDARY |
| <div></div> | IMPACT AREA TYPE ID. (SEE BELOW) |
| <div></div> | IMPACT AREA ID. AND/OR NUMBER |
| O = OPEN WATER IMPACT | |
| W = WETLAND IMPACT | |



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| ADDENDA / REVISIONS | |
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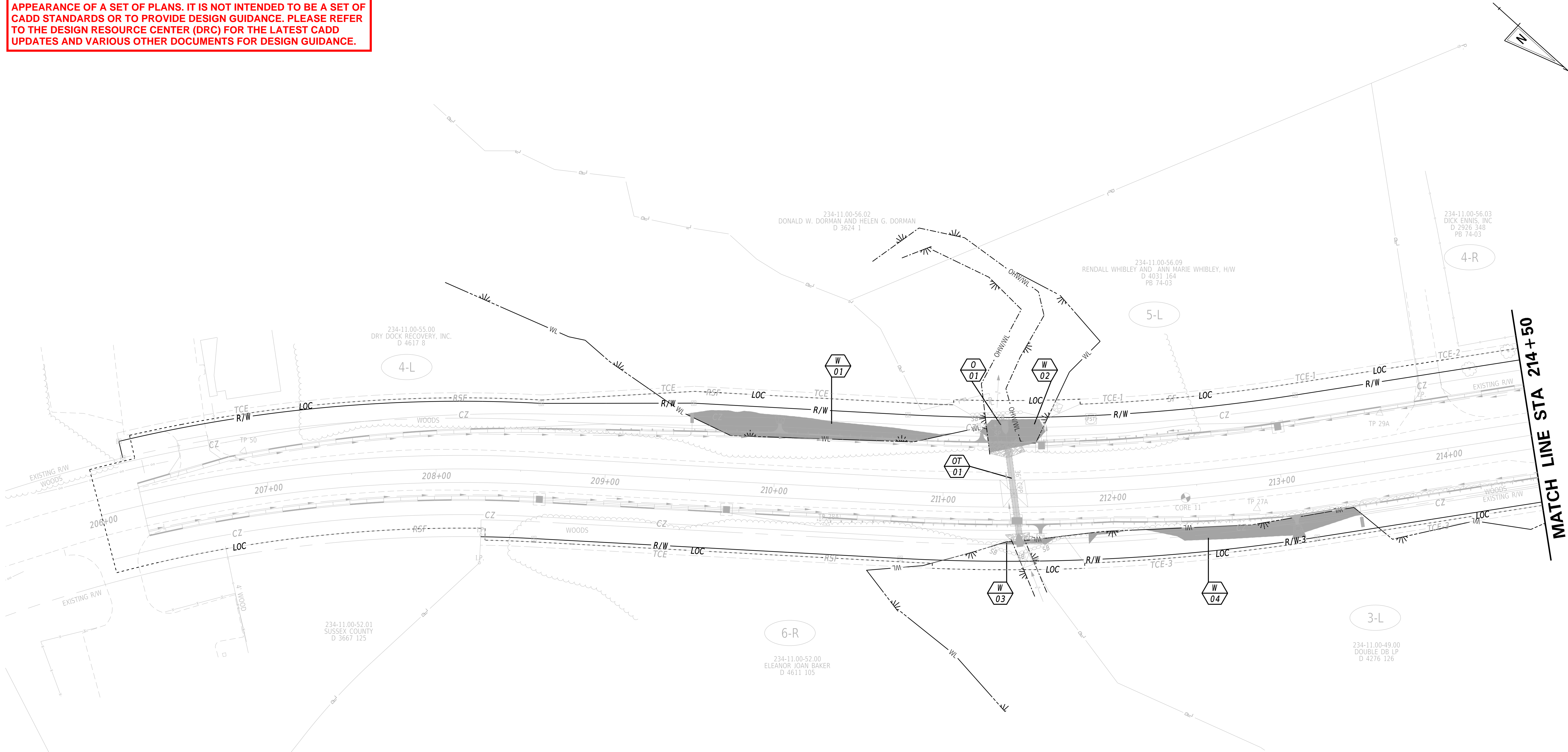


HSIP SC, SR24 AT CAMP
ARROW HEAD ROAD AND
SR24 AT ANGOLA ROAD

| | | |
|------------|--------------|-----------|
| CONTRACT | BRIDGE NO. | N/A |
| T201200902 | DESIGNED BY: | W. NAUMAN |
| COUNTY | CHECKED BY: | C. ESHAM |
| SUSSEX | | |

| ENVIRONMENTAL COMPLIANCE PLAN | |
|-------------------------------|----|
| SECTION | PD |
| SHEET NO. | 43 |

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| PERMANENT WETLAND IMPACT AREA SCHEDULE | | | | | |
|--|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 4-01 | FILL / RIP RAP | 1491.44 | 0.0342 | N/A | USACE |
| 4-02 | RIP RAP | 193.47 | 0.0044 | N/A | USACE |
| 4-03 | RIP RAP | 67.62 | 0.0016 | N/A | USACE |
| 4-04 | FILL / RIP RAP | 950.84 | 0.0218 | N/A | USACE |
| TOTAL PERM. WETLAND IMPACT AREAS | | 2703.37 | 0.0620 | N/A | USACE |

| PERMANENT OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 4-01 | RIP RAP | 346.86 | 0.0079 | 3.33 | USACE |

| TEMPORARY OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 4-01 | 29" X 45" RCP PIPE | 191.00 | 0.0043 | 16.50 | USACE |

LEGEND

PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

OHW/WL

ORDINARY HIGH WATER / WETLAND

WL

WETLAND BOUNDARY

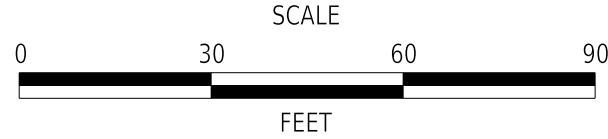
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IMPACT AREA TYPE ID. (SEE BELOW)
IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT

W = WETLAND IMPACT

| ADDENDA / REVISIONS | |
|---------------------|--|
| | |
| | |
| | |
| | |



HSIP SC, SR24 AT CAMP
ARROW HEAD ROAD AND
SR24 AT ANGOLA ROAD

| | | |
|------------|--------------|-----------|
| CONTRACT | BRIDGE NO. | N/A |
| T201200902 | DESIGNED BY: | W. NAUMAN |
| COUNTY | CHECKED BY: | C. ESHAM |
| SUSSEX | | |

ENVIRONMENTAL
COMPLIANCE PLAN

| |
|-----------|
| EC-04 |
| SECTION |
| PD |
| SHEET NO. |
| 44 |

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DISCLAIMER:
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| PERMANENT WETLAND IMPACT AREA SCHEDULE | | | | | |
|--|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 5-01 | FILL | 1154.15 | 0.0265 | N/A | USACE |
| 5-02 | FILL | 332.46 | 0.0076 | N/A | USACE |
| 5-03 | FILL | 912.03 | 0.0209 | N/A | USACE |
| 5-04 | FILL / FILL | 129.02 | 0.0030 | N/A | USACE |
| TOTAL WETLAND PERM.IMPACT AREA | | 2527.66 | 0.0580 | N/A | USACE |

LEGEND

PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

OHW/WL - ORDINARY HIGH WATER / WETLAND

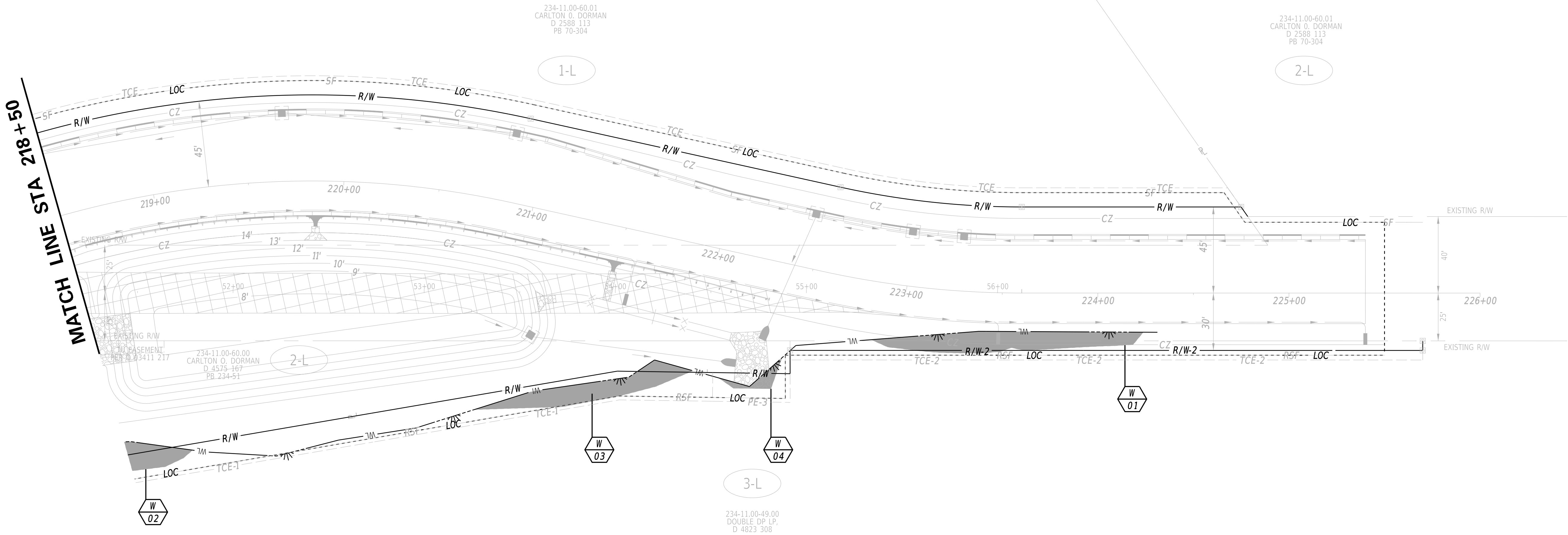
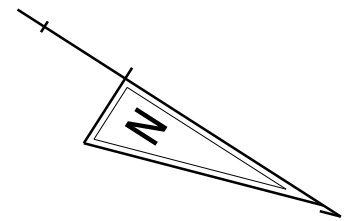
WL - WETLAND BOUNDARY

XX
ZX

IMPACT AREA TYPE ID. (SEE BELOW)
IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT

W = WETLAND IMPACT



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| | | | | | | | | |
|---------------------|--|--|---|------------|--------------|-----------|----------------------------------|-----------|
| ADDENDA / REVISIONS | | <div>SCALE</div> <div>0 30 60 90</div> <div>FEET</div> | HSIP SC, SR24 AT CAMP ARROW HEAD ROAD AND SR24 AT ANGOLA ROAD | CONTRACT | BRIDGE NO. | N/A | ENVIRONMENTAL COMPLIANCE PLAN | EC-05 |
| | | | | T201200902 | DESIGNED BY: | W. NAUMAN | | SECTION |
| | | | | COUNTY | CHECKED BY: | C. ESHAM | | PD |
| | | | | KENT | | | | SHEET NO. |
| | | | | | | | | 45 |